ASSESSING THE VALUE OF MULTI-STRATEGY FUND OF HEDGE FUNDS

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Introduction

Over the last decade, institutional investors have increasingly incorporated hedge fund ("HF") strategies into their programs in pursuit of enhanced returns and improved diversification. Many investors, recognizing that they do not have the appropriate resources, expertise, and/or governance model to build a portfolio of individual hedge funds, have chosen to invest in this category through fund-of-funds. In return for an additional layer of fees, fund of hedge fund ("FOHFs") providers historically have sought to add value through hedge fund selection, asset allocation, and risk management. In recent years, however, investors have begun to reassess the fund of fund approach to hedge fund investing.

At NEPC, our research suggests that only a minority of FOHFs have consistently added value and we believe that such value-creating FOHFs can continue to play an important role in institutional investment programs. While some institutional investors have evolved from FOHFs toward direct hedge fund investments or to adopt a "core/satellite" approach (involving a combination of FOHFs and individual hedge fund strategies), for other investors who remain either resource and/or skill constrained, value-creating FOHFs continue to represent an appropriate way to access the benefits of hedge fund investing.

In this paper we draw support from NEPC's experience working with FOHFs and institutional investors as well as applied research by a cross-section of practitioners and academicians to examine key issues in evaluating FOHFs:

- How have FOHFs been evaluated historically?
- How do FOHFs create value?
- Are all FOHFs value creators?
- How to discover value-creating FOHFs?
- What are some examples of value creating FOHFs?
- Where is the future market opportunity for such value creating FOHFs?

VALUE-CREATING FOHFs CAN CONTINUE TO PLAY AN IMPORTANT ROLE IN INSTITUTIONAL INVESTMENT PROGRAMS.

As part of this discussion, we describe our holistic "6P" process for evaluating FOHFs whereby we strive to identify the limited universe of value-creating managers, as well as their key characteristics. In this way, we believe that we can help clients (for whom it is appropriate) to continue incorporating FOHFs as an important part of their long-term investment programs.

How Have FOHFs Been Evaluated Historically?

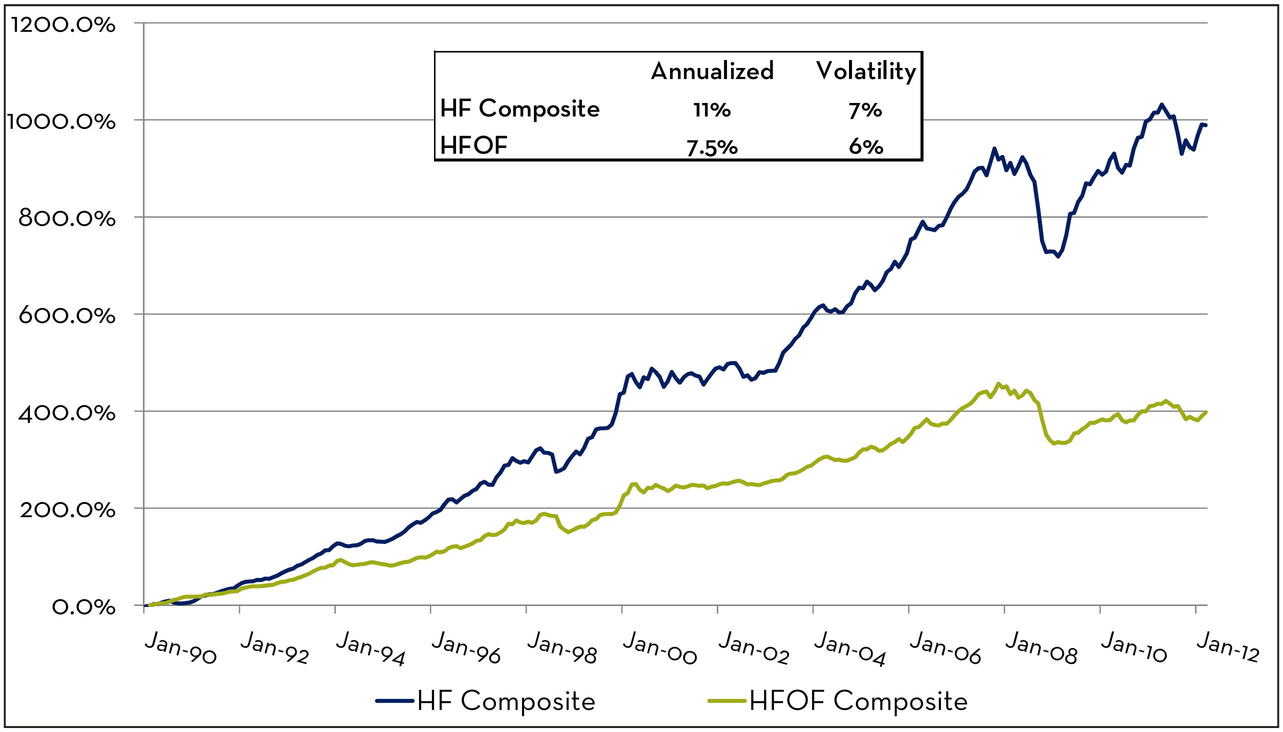
When investors question the value proposition of FOHFs they are essentially comparing the long term performance of FOHFs, represented by the FOHF Composite depicted by the green line in **Exhibit 1,** to the performance of direct HF strategies represented by the HF Composite, the blue line on the graph.

In this comparison, FOHFs appear to have captured approximately 70% of hedge fund returns (even though at a slightly lower volatility) over the long term. This performance history leads some investors to ask "what are we getting for our fees?"

In a low-return environment, the urge to save on fees is understandable; however, we think comparing the HFOF composite to the HF Composite is like comparing apples to oranges. This is primarily due to two reasons:

1) The HF Composite represents the equal weighted performance of hedge funds across a

Exhibit 1. Historical Performance of FOHFs vs. Hedge Funds



Source: Hedge Fund Research Institute

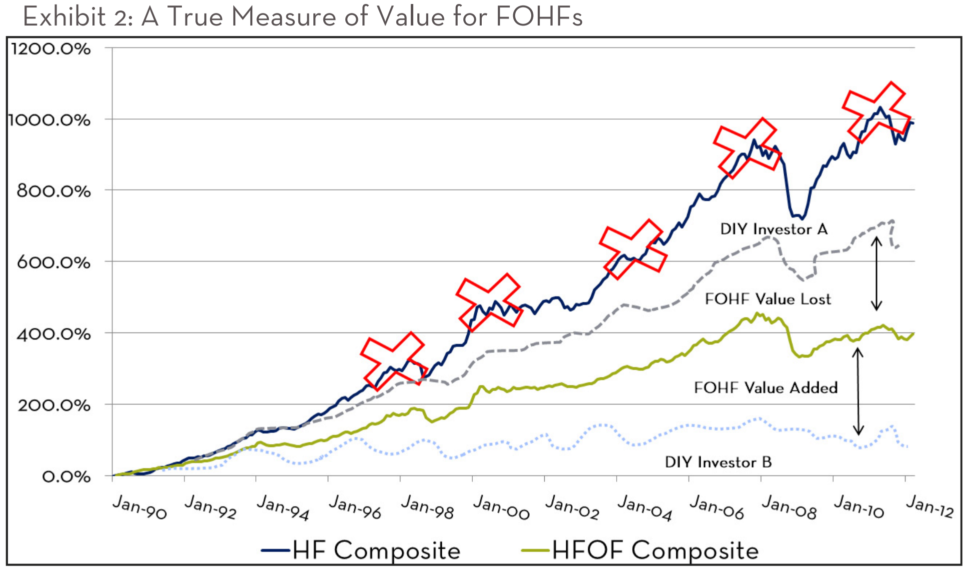
broad range of strategies that report into the HFR database. The HFOF composite represents an array of FOHFs, each of which is constructed differently. So while the HF composite is a collection of equal weighted hedge funds, the FOHF index is an assembly of different portfolio construction styles.

2) The HF composite is upwardly biased as it captures the returns of only those managers who have survived[1] through time and ignores those that have failed along the way. Failed firms stop reporting to the HF data base and eventually drop out. However, the FOHF composite captures the performance of investing with both surviving hedge funds and those that failed in the past, the effects of which might linger into the future.

These flaws indicate that comparing FOHFs to HF Composite overlook "how" the FOHFs were put together. The experience of selecting managers from a universe of both good and bad managers, and blending them into a portfolio is ignored. In addition, the green line is dragged down by the second layer of fees charged by FOHFs whereas the blue line reflects only the fees from underlying hedge funds.

So what is the proper way to evaluate FOHFs? An intuitive approach boils down to how one would assess any other outsourcing function: how would one fare constructing one's own house vs. going to a professional builder; fixing one's own car vs. going to an auto mechanic; or, in an extreme case, how painlessly could one extract a tooth vs. going to a dentist? If we are comparing

Exhibit 2: A True Measure of Value for FOHFs



Source: NEPC

across professionals, how would two home builders or two auto shops compare to one another.

WHEN IT COMES TO EVALUATING A FOHF WE SHOULD BE COMPARING *HOW* AN INVESTOR WOULD FARE IN REPLICATING THE EXPERIENCE OF THE FOHF.

Similarly, when it comes to evaluating a FOHF we should be comparing *how* an investor fared/ would fare in replicating the experience of the FOHF under consideration both in selecting managers from a universe of good and not-so good hedge funds and then combining those managers in an effective manner. So if the experience of an investor is similar to Investor A's in **Exhibit 2**, then he/she has had superior performance, but if the performance turns out to be like Investor B's, leading that investor to finish below the FOHF being evaluated, then potential value might have been lost.

How do FOHFs create value?

Many aspects of investing in hedge funds represent a talent hunt. **Exhibit 3** depicts the landscape of hedge fund strategies. Navigating this maze of sophisticated strategies to tap into investment opportunities requires talent as well. Hedge funds offer incentives to lure many creative minds to exploit fast changing investment environments. Not all talent is successful, however, and many fail along the way. The constant challenge is to discover those talented investors most capable of executing investment strategies that will succeed in rapidly changing investing conditions.

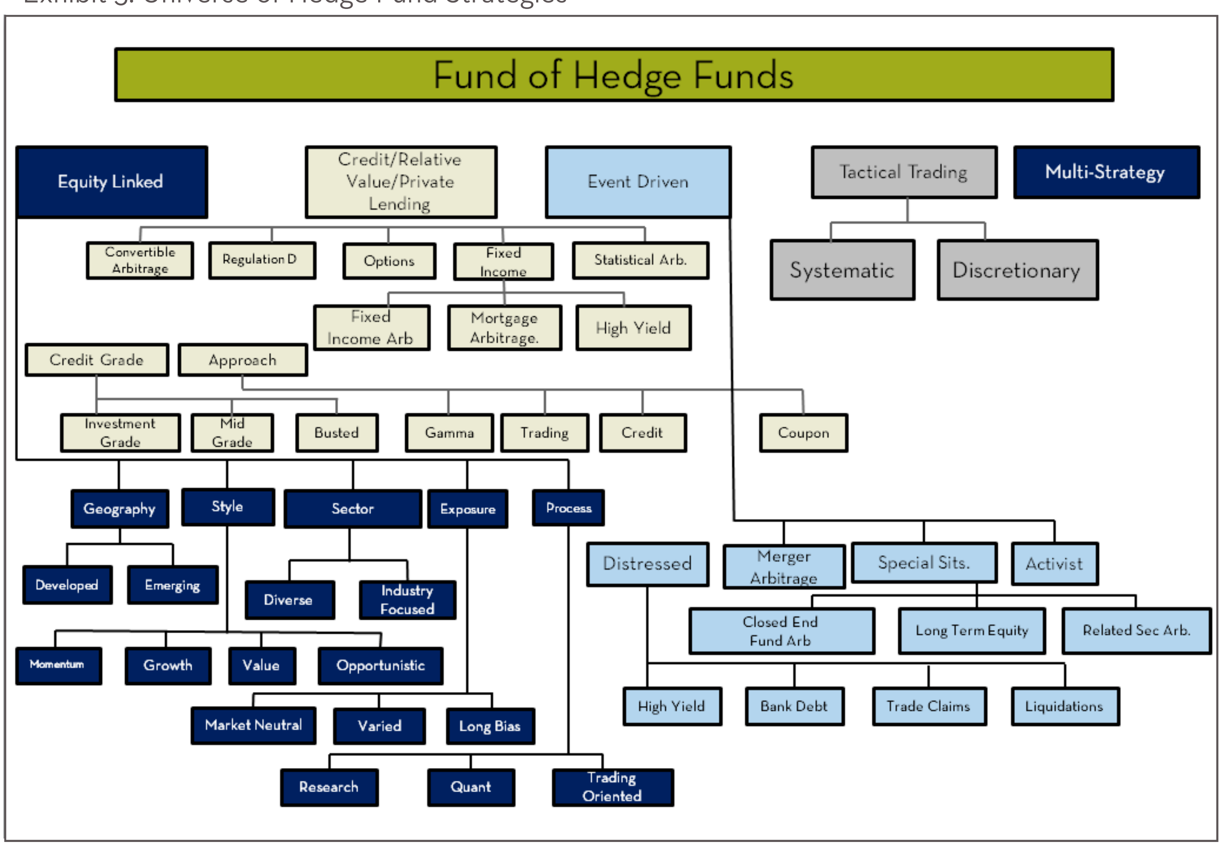
To discover talent, an investor has to consider a host of factors, including:

– *Managers' assets under management*
– *Managers' age and experience*
– *Size and composition of team*
– *Specialist or generalist mangers*
– *Liquidity of strategy/illiquidity premium*
– *Location of managers – domestic or foreign*
– *Funds' investment structure*

Yet another challenge in a dynamically changing world is figuring out in which strategies to invest. **Exhibit 4** shows the wide divergence of hedge fund performance from year to year as strategies go in and out of favor.

After the selection of types of strategies and managers (the talent hunt) begins the process of

Exhibit 3: Universe of Hedge Fund Strategies



Source: NEPC

Exhibit 4: HFRI Indices Annual Investment Returns- 1998-2011

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
S&P 500 28.59%	HFRI Emerging Markets 55.86%	HFRI ED: Merger Arb 18.02%	HFRI RV: ConvertArb 13.37%	Barclays Gov't Credit 12.10%	HFRI Emerging Markets 39.36%	HFRI ED: Distressed 18.89%	HFRI Emerging Markets 21.04%	HFRI Emerging Markets 24.26%	HFRI Emerging Markets 24.92%	Barclays Gov't Credit 6.09%	HFRI RV: ConvertArb 60.17%	S&P 500 15.08%	Barclays Gov't Credit 9.24%
HFRI Equity Hedge 15.98%	HFRI Equity Hedge 44.22%	HFRI EH: Eq Mrkt Ntrl 14.56%	HFRI ED: Distressed 13.28%	HFRI RV: ConvertArb 9.05%	HFRI ED: Distressed 29.56%	HFRI Emerging 18.42%	HFRI Equity Hedge 10.60%	HFRI ED: Distressed 15.94%	HFRI Macro 11.11%	HFRI Macro 4.83%	HFRI Emerging Markets 40.24%	HFRI RV: ConvertArb 13.07%	S&P 500 2.09%
Barclays Gov't Credit 12.00%	HFRI Fund Wght Comp 31.29%	HFRI RV: ConvertArb 14.50%	HFRI Event Driven 12.18%	HFRI Macro 7.44%	S&P 500 28.67%	HFRI Event Driven 15.01%	HFRI Fund Wght Comp 9.30%	S&P 500 15.78%	HFRI Equity Hedge 10.48%	HFRI ED: Merger Arb -5.36%	HFRI ED: Distressed 28.13%	HFRI Emerging Markets 11.96%	HFRI ED: Merger Arb 1.48%
HFRI EH: Eq Mrkt Ntrl 8.30%	HFRI FOF Composite 26.47%	HFRI Relative Value 13.41%	HFRI Emerging Markets 10.36%	HFRI Relative Value 5.44%	HFRI Event Driven 25.33%	S&P 500 10.86%	HFRI ED: Distressed 8.27%	HFRI Event Driven 15.33%	HFRI FOF Composite 10.25%	HFRI EH: Eq Mrkt Ntrl -5.93%	S&P 500 26.47%	HFRI Relative Value 11.73%	HFRI Relative Value 0.15%
HFRI RV: ConvertArb 7.77%	HFRI Event Driven 24.33%	Barclays Gov't Credit 13.27%	Barclays Gov't Credit 9.40%	HFRI ED: Distressed 5.28%	HFRI Macro 21.42%	HFRI Fund Wght Comp 9.03%	HFRI FOF Composite 7.49%	HFRI ED: Merger Arb 14.24%	HFRI Fund Wght Comp 9.96%	HFRI Relative Value -18.04%	HFRI Relative Value 25.80%	HFRI Event Driven 11.53%	HFRI ED: Distressed -1.79%
HFRI ED: Merger Arb 7.23%	S&P 500 21.03%	HFRI Equity Hedge 9.09%	HFRI Relative Value 8.92%	HFRI Emerging Markets 3.70%	HFRI Equity Hedge 20.54%	HFRI Equity Hedge 7.68%	HFRI Event Driven 7.29%	HFRI Fund Wght Comp 12.89%	HFRI Relative Value 8.94%	HFRI Fund Wght Comp -19.02%	HFRI Event Driven 25.04%	HFRI ED: Distressed 11.26%	HFRI EH: Eq Mrkt Ntrl -2.12%
HFRI Macro 6.19%	HFRI Macro 17.62%	HFRI Event Driven 6.74%	HFRI Macro 6.87%	HFRI FOF Composite 1.02%	HFRI Fund Wght Comp 19.55%	HFRI FOF Composite 6.86%	HFRI Macro 6.79%	HFRI Relative Value 12.37%	Barclays Gov't Credit 7.75%	HFRI FOF Composite -21.36%	HFRI Equity Hedge 24.55%	HFRI Equity Hedge 10.58%	HFRI Event Driven -3.30%
HFRI Relative 2.81%	HFRI ED: Distressed 16.94%	HFRI Fund Wght Comp 4.98%	HFRI EH: Eq Mrkt Ntrl 6.71%	HFRI EH: Eq Mrkt 0.98%	HFRI FOF Composite 11.61%	HFRI Relative 5.58%	HFRI ED: Merger Arb 6.25%	HFRI RV: ConvertArb 12.17%	HFRI ED: Merger Arb 7.05%	HFRI Event Driven -21.82%	HFRI Fund Wght Comp 19.98%	HFRI Fund Wght Comp 10.49%	HFRI Macro -4.16%
HFRI Fund Wght Comp 2.62%	HFRI Relative Value 14.73%	HFRI FOF Composite 4.07%	HFRI Fund Wght Comp 4.62%	HFRI ED: Merger Arb -0.87%	HFRI RV: ConvertArb 9.93%	HFRI Macro 4.63%	HFRI EH: Eq Mrkt Ntrl 6.22%	HFRI Equity Hedge 11.71%	HFRI Event Driven 6.61%	HFRI ED: Distressed -25.20%	HFRI ED: Merger Arb 11.63%	HFRI Macro 8.61%	HFRI RV: ConvertArb -5.16%
HFRI Event Driven 1.70%	HFRI RV: ConvertArb 14.41%	HFRI ED: Distressed 2.78%	HFRI FOF Composite 2.80%	HFRI Fund Wght Comp -1.45%	HFRI Relative Value 9.72%	Barclays Gov't Credit	HFRI Relative Value 6.02%	HFRI FOF Composite 10.39%	S&P 500 5.49%	HFRI Equity Hedge -26.65%	HFRI FOF Composite 11.46%	Barclays Gov't Credit 6.99%	HFRI Fund Wght Comp -5.25%
HFRI ED: Distressed -4.23%	HFRI ED: Merger Arb 14.34%	HFRI Macro 1.97%	HFRI ED: Merger Arb 2.76%	HFRI Event Driven -4.30%	HFRI ED: Merger Arb 7.47%	HFRI EH: Eq Mrkt Ntrl 4.15%	S&P 500 4.91%	HFRI Macro 8.15%	HFRI RV: ConvertArb 5.33%	HFRI RV: ConvertArb -33.71%	Barclays Gov't Credit 4.81%	HFRI FOF Composite 5.60%	HFRI FOF Composite -5.73%
HFRI FOF Composite -5.11%	HFRI EH: Eq Mrkt Ntrl 7.09%	S&P 500 -9.09%	HFRI Equity Hedge 0.40%	HFRI Equity Hedge -4.71%	Barclays Gov't Credit	HFRI ED: Merger Arb 4.08%	Barclays Gov't Credit 2.55%	HFRI EH: Eq Mrkt Ntrl 7.32%	HFRI EH: Eq Mrkt Ntrl 5.29%	S&P 500 -36.99%	HFRI Macro 4.37%	HFRI ED: Merger Arb 4.60%	HFRI Equity Hedge -8.38%
HFRI Emerging Markets -32.96%	Barclays Gov't Credit -2.40%	HFRI Emerging Markets -10.71%	S&P 500 -11.85%	S&P 500 -22.09%	HFRI EH: Eq Mrkt Ntrl 2.44%	HFRI RV: ConvertArb 1.18%	HFRI RV: ConvertArb -1.86%	Barclays Gov't Credit 4.07%	HFRI ED: Distressed 5.08%	HFRI Emerging Markets -37.26%	HFRI EH: Eq Mrkt Ntrl 1.43%	HFRI EH: Eq Mrkt Ntrl 3.16%	HFRI Emerging Markets -13.99%

Source: Hedge Fund Research Institute

portfolio construction. Key considerations in portfolio construction include:

1) Pursuing a top down view and finding managers most capable to fulfill strategy allocations, or focusing first on bringing together the most talented managers and then allocating to each strategy;

2) Determining how strategies and managers are weighted in the portfolio;

3) Maintaining more static allocations or moving dynamically/tactically with changes in the investing climate

Regardless of priority, manager selection and portfolio construction are both very meaningful and challenging investment decisions. When evaluating investing in FOHFs versus building a direct program, it is important to evaluate the relative abilities to perform both these tasks.

Deustsche Bank asked Institutional Investors in Alternative Investment Surveys[2] conducted in 2011 and 2012, *"What is the biggest impediment to growing your direct hedge fund allocations?"* in other words, how confident investors felt about putting together their own hedge fund program. In 2011, a majority (65%) expressed their relative inability to construct their own hedge fund program. More than one third admitted they lacked internal resources and skills while a similar proportion of respondents were risk-averse to a host of factors. As depicted in Exhibit 5, in 2012, an increasing proportion of respondents (78%) lacked confidence. Therefore, while many investors balk at the double layer of fees of FOHFs and seek to build direct HF programs, the majority may not yet be ready to take that step due to a lack of internal resources or requisite skills.

As a result, many investors must rely on outsourcing HF management to professional investors who pursue both manager selection and asset allocation in an effort to create value. But investors in turning to FOHFs would be mistaken to assume that all FOHFs are alike in their ability to select managers and, more importantly, to construct portfolios. Just as the capabilities of home-builders, auto shops, and dentists vary, so do the manager selection and asset allocation capabilities of FOHFs. This means that when investors evaluate a FOHF, they need to fully understand how a FOHF constructs investment portfolios including prioritizing sub-strategy and manager selection and then adjusting those weights over time. We distinguish here between strategic allocations among strategies with a longer-term horizon and shifting those weights tactically over a shorter horizon in anticipation of or in response to changing market conditions.

MANY INVESTORS MUST RELY ON OUTSOURCING HF MANAGEMENT TO PROFESSIONAL INVESTORS WHO PURSUE BOTH MANAGER SELECTION AND ASSET ALLOCATION IN AN EFFORT TO CREATE VALUE.

But before attempting to understand portfolio construction styles (i.e. the "how") it is paramount, in our opinion, to understand what drives the "how".

The "how" or portfolio construction is mainly guided by:

a) *Investment philosophy*- the manner in which the FOHF is hard-wired to think of investments, what we call the FOHF's DNA. For example, one FOHF might view investments as the present value of a stream of future cash flows while another could think of investing with the aim to extract premiums in uniquely difficult or idiosyncratic situations. So while the first FOHF is likely to construct portfolios with more fundamental strategies with predictable cash flows the latter might pursue events and opportunistic plays.

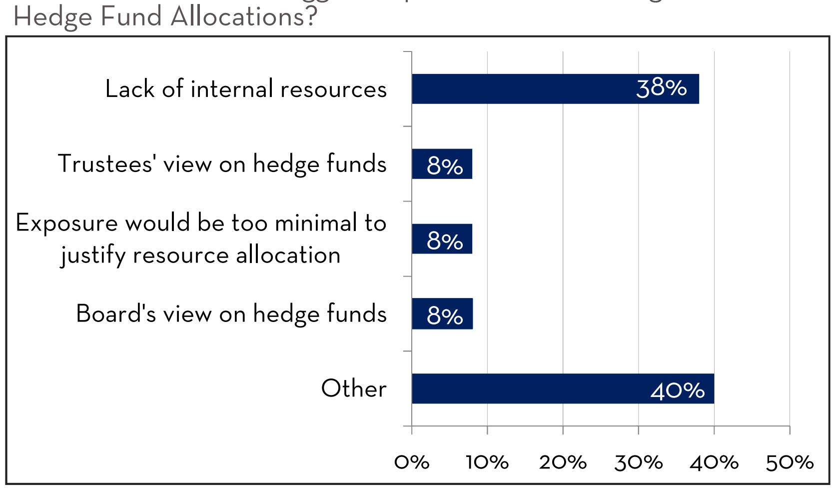
b) *Business considerations*- Many FOHFs who have built thriving businesses seek to maintain their franchises with stable revenues rather than focusing on earning incentives predicated on superior performance. Such FOHFs are often successful in attracting investors who are seeking "safety" in stable operations rather than value creation. Specializing in catering to the demands of a certain client type can become a driving force in shaping a FOHF's portfolio construction style.

Just as a home-builder becomes known for constructing a certain style of home, a FOHF ought to be recognized for its portfolio construction style. Portfolio construction style helps define a FOHF's peer group to provide a true measure of relative performance to distill the class of value creators. In summary, portfolio construction is the essence of a FOHF's value creation.

Therefore, in evaluating FOHFs it is critical to evaluate which factor - Strategic Asset Allocation, Tactical Allocation, or Manager Selection - accounts for a major part of the return variability of FOHFs over time? FOHFs, however, often do not provide sufficient transparency to facilitate a meaningful comparison to assess their relative performance. To explore this, we draw upon the findings of a recent study[3] of FOHFs **(Exhibit 6)** conducted by the EDHEC Institute which seeks to quantify the impact of these factors on performance over time.

From a universe of more than 1,000 FOHFs, EDHEC studied the performance attribution of nearly 200 FOHFs that could show a continuous track record from January 2000-July 2009. The researchers decomposed the performance of these FOHFs into their sub components - strategic asset allocation, tactical allocation, and manager selection - to arrive at the conclusion that strategic asset allocation accounts for a large part (68%) of FOHFs' return variability. The balance is explained by manager selection and tactical allocation.

Exhibit 5: What is the Biggest Impediment to Growing Your Direct Hedge Fund Allocations?



Note: "Other" includes lack of opportunities, capacity issues, liquidity profile, poor returns, and peer risk.

Source: 2012 Deutsche Bank Alternative Investment Survey

Exhibit 6: Value Addition of Fund of Hedge Funds

Fund Performance		
	Value added through fund/stock picking	Alpha benefits
	Value added through tactical allocation	Dynamic beta benefits
	Value added through strategic allocation	Static betas benefits
	Return on the neutral portfolio	Performance of an uninformed investor

Source: EDHEC-Risk Institute

Finally, tactical allocation (the central column in the tables in **Exhibit 7** is observed as a relatively small value contributor in both good and bad times, however, with the risk of incurring large losses on wrong tactical moves in crisis periods.

Thus manager selection appears to be the biggest source of value added for FOHFs in both normal and crisis periods though a bigger majority of FOHFs appear successful in harnessing strategic asset allocation as a safer bet in crisis periods . Tactical asset allocation appears to be a small differentiator in both periods.

PORTFOLIO CONSTRUCTION IS THE ESSENCE OF A FOHF's VALUE CREATION.

At NEPC, where we benefit from additional transparency into FOHFs' portfolios and processes, we find from our experience that asset allocation is a safer harbor for most FOHFs that promote "stability" as their value proposition, build their business around stable returns, and, consequently, generate stable revenues for themselves. This is validated in the second part of the EDHEC Study (please see black boxes in **Exhibit 7**) that proved that almost half the FOHFs were successful adding modest value in normal periods and those who did not detracted little thus assuring greater stability of returns. In crisis periods (June 2007-July 2009 as shown in **Exhibit 7(b)** in fact, strategic asset allocation becomes a big value driver for a bigger majority (78%) of managers. Thus strategic asset allocation is the safest bet in both normal and crisis periods.

But FOHFs who are confident in their ability to select good managers also attempt to add value through manager selection by investing with both proven "brand name" managers and emerging talent who might not be accessible for most investors. While 93% of FOHFs were able to extract value from manager selection in normal times, only about half were successful in adding value through manager selection in crisis periods, though with a higher average contribution. This is highlighted by the green circle in the **Exhibit 7**. Those FOHFs who are successful in adding value through manager selection in both normal and crisis periods differentiate themselves.

Are All FOHFs Value Creators?

The brief answer is NO. In our research we evaluate FOHF portfolios and track records to separate value creation into two sub-components: asset allocation and manager selection. For most FOHFs we find little consistency over time in delivering value. During the Credit Crisis, for example, many FOHFs with previously good performance appear to have lost value either through poor allocation decisions or investing with managers that failed to adjust to a new era of persisting volatility. During the same period, other FOHFs with less strong historical results have been able to learn from the crisis to post decent performance in the choppy markets of the last few years.

A 2011 study[4] of hedge fund performance came to similar conclusions. The researchers evaluated the returns of more than 1,300 FOHFs over 15+

Exhibit 7(a): Value Added Over Normal Market Conditions
January 2000-June 2007

Value Added over Normal Market Conditions				
Percentiles	Total	Strategic	Tactical	Fund picking
% > 0	100%	48.4%	60.9%	92.9%
Mean (> 0)	7.76%	1.54%	1.24%	3.89%
% < 0	0.0%	51.6%	39.1%	7.1%
Mean (< 0)	-	-0.64%	-1.08%	-2.11%

Exhibit 7(b): Value Added Over Stressed Market Conditions
June 2007-July 2009

Value Added over Stressed Market Conditions				
Percentiles	Total	Strategic	Tactical	Fund picking
% > 0	9.8%	77.7%	30.9%	48.4%
Mean (> 0)	5.64%	3.50%	1.86%	4.18%
% < 0	90.2%	22.3%	69.1%	51.6%
Mean (< 0)	-8.65%	-0.99%	-3.13%	-4.30%

Source: EDHEC-Risk Institute

years, with two objectives:

1) To determine whether FOHFs were a good conduit of channeling the value creation from the underlying managers after deducting the second layer of fees - a test for a FOHF's portfolio construction capabilities; and

2) To examine how many FOHFs were successful in adding value through astute manager selection.

FOHFs CAN POTENTIALLY ADD VALUE BUT ONLY A FEW ACTUALLY *DO* ADD VALUE. THE CHALLENGE IS TO FIND THE SUCCESSFUL FEW IN A CROWDED UNIVERSE OF 2000+ FOHFs.

The results showed that only 1 in 5 managers was able to transfer the alpha from underlying managers or had superior portfolio construction capabilities. In the second instance the results showed that approx. 5% of the managers added value through superior manager selection. In other words, the universe of FOHFs who can both preserve value from underlying managers through good portfolio construction and create value through good manager selection is quite small. Therefore FOHFs can potentially add value but only a few actually *do* add value. The challenge is to find the successful few in a crowded universe of 2000+ FOHFs.

Search for Value Creators: A 6P Approach

At NEPC, our research leads us to believe that value creators do exist among FOHFs. Identifying these managers, however, takes a lot of effort. A FOHF is likely hired to perform a certain role in a hedge fund portfolio in the context of the investors' overall objectives. Thus, it is important to understand the role a FOHF manager is hired to play and then evaluate how effective it may prove in fulfilling that role.

At NEPC, we strive to understand the manager's philosophy and resulting behavior as a guide to assessing the role a FOHF might play in an investment portfolio. To do so, we take a holistic view of the FOHF, reflected in our "6P" approach. In this process we evaluate:

People
Philosophy
Process
Performance
Price
Perpetuity

Each element of our 6P approach is described in detail below. At the outset, it is important to emphasize that it is highly unlikely to find one perfect FOHF that has "all" the features listed below. Those that have most of the desirable ingredients present a more attractive picture among their peer group.

People

As we all know, people drive decisions and processes whether at a FOHF, or anywhere else. Investors seek stewards of capital—well intentioned people who can make good investment decisions and execute consistently through a well-defined process. Ideally, well-rounded teams with diverse skill sets are more effective than those that exhibit strength in one or two strategies, but often a "key person" can be the single biggest driving force.

It is important to assess the integrity of decision makers and their capabilities to deliver consistently. In this regard, motivations of people provide valuable insights into how trustworthy they might be. If a FOHF team consists of people with successful pedigrees who came together to capitalize on their passion and knowledge of strategies and hedge fund managers accessible through their networks, they are more likely to be successful FOHF managers and businesses than those who are driven by the one-sided desire to build and grow a successful FOHF business (on merely establishing an institutional infrastructure that gives investors the comfort of perceived safety). The twin objectives of building a successful FOHF and business have to go hand in hand.

Philosophy

While performance cannot be predicted, there is a greater chance that a team's investment beliefs resonate through time. Investment tenets serve as good indicators of manager behavior to understand "what can the FOHF do *to* my portfolio and what can the manager do *for* my portfolio." To carefully appreciate both of these propositions, it is paramount to get behind the numbers to understand the psyche of the FOHF manager in managing the portfolio through various market cycles. In other words, one must assess what motivations have consistently guided the FOHF manager in the past in managing the portfolio. Does the manager pursue above-average returns and is he/she willing to take risks that this entails, or does the manager seek only the returns that are commensurate with the risks he/she is willing to take? While both of these questions call for balancing risk and reward, each defines a different mindset. Philosophies influence styles that FOHFs adopt, which in turn drive portfolio construction and risk management processes. When a philosophy guides a FOHF's thinking and has a pervasive influence on its processes, it can be easily articulated. This distinguishes a manager with clarity of purpose from those who are less thoughtful about their portfolios.

Process

Processes, in our opinion, are three-fold:

I. Investment research
II. Portfolio construction
III. Risk management

I. Investment Research

Research capabilities are defined by who is doing the research, what is the subject of the research, and how the research function is executed.

i. Research Team

Adequacy of research personnel and breadth and depth of experience are both valuable. A well-staffed research unit is a reflection of the quality and depth of investment due diligence that can be expected of a FOHF. Teams that are spread too thin are unlikely to devote sufficient time and attention to underlying managers. Such teams may be stretched too thin to discover new ideas and run the risk of being "married" to proven names. By the same token, past experience with strategies and manager selection are equally important to oversee underlying managers and uncover new talent. Some teams are empowered by people who have traded some hedge fund strategies before; others consist of people with years of experience in selecting good quality hedge funds. Principal strategy trading experience is not universal, hence can be an important differentiator across FOHFs.

ii. Research Agenda

A good research team is discerning in its choice of managers, knows what to expect out of each underlying manager, and can increase/decrease allocations when appropriate. By extension, these FOHFs know the type of manager they seek in each strategy (e.g., small nimble managers in equity long/short and large established managers in global macro). Well-defined research criteria impart discipline to the research process and are likely to be well integrated with the FOHF's investment philosophy.

As stated before, hedge fund investing is a search for investing talent and that is supported further by the overarching influence of manager selection on portfolio performance. The search for talent is an ongoing endeavor at a good quality FOHF, which is constantly looking beyond proven names for the next rising star. In this regard, many academic studies support the choice of newer and smaller managers over more established and larger hedge funds.

For example, in a study[5] of hedge funds over the period January 1996 to December 2007, small or young funds posted superior returns due to their:

- Ability to select only from their best investment ideas;
- Ability to easily maneuver while simultaneously attracting less attention (as position sizes are also smaller) to their strategic moves, particularly in volatile markets; and,
- Ability to exploit small market inefficiencies and opportunities that larger funds may have to ignore due to limited capacity, which might prove inconsequential to overall returns.

Larger funds, on the other hand, may face performance headwinds due to:

- A bigger focus on maintaining their franchise; and
- The presence of large and perhaps more conservative investors who might be less demanding of performance, leading to a concentration in staid investment ideas combined with some extraneous investments outside the FOHF's core competency to overcome capacity constraints and keep capital in play.

The quest for idiosyncratic performance in a low-return environment, combined with rising correlations, is turning "emerging managers" into a catch phrase among investors and FOHFs alike. Some large institutional investors and FOHFs are running seeding platforms as new talent becomes available from proprietary desks in the wake of the Volker Rule. Despite the apparent need to incorporate new talent in FOHF portfolios, the ability to conduct due diligence on such unproven talent requires both fortitude and capability. A FOHF investing in small managers has to accurately assess the higher risk of failure (for operational reasons) associated with these managers. Right-sizing such allocations is also important to diversify concentration risk in a hedge fund manager's assets under management and limit losses and/or markdowns in the portfolio, if any. Assessing asymmetric payoffs and knowing when to "pull the plug" is a valuable trait of a good quality FOHF. As a result, some direct investors could be deterred from investing with new talent and, therefore, might miss the upside potential of small managers.

Apart from size, a good FOHF is conscious about its choice of specialists versus generalists. In the case of geographic region-specific managers, the ability to source and evaluate local talent is very important. On-the-ground research staffed with local talent with well-developed local networks are advantages enjoyed by only a few FOHFs. Equally important is the ability to negotiate investment structures (e.g., separate accounts, fund of ones) and fee arrangements that afford better transparency, allow greater control, maintain good liquidity, and grant fee concessions to the benefit of FOHF investors.

iii. Continuing Research

Monitoring managers on an ongoing basis is a function of both adequate resources and the ability of the FOHF to command respect and accountability from underlying managers. Some FOHFs can gain valuable insights through constant dialogue and frequent interactions with the underlying managers beyond what periodic reports from managers and risk aggregators (such as Risk Metrics and Measurisk) might provide. Concurrently, seeking new managers is again a distinguishing trait of proactive FOHFs that maintain a robust pipeline of new ideas to keep their portfolios current in response to a rapidly changing opportunity set.

Dedicated operational due diligence is almost indispensable for verifying the soundness of HF business operations. A rare but notable differentiator for some FOHFs is the existence of due diligence that evaluates the inherent risk of investing strategies and business operations beyond simply running conventional risk analytics (stress test, scenario analysis, value-at-risk, etc.). Independent risk due diligence speaks to the risk culture of the FOHF and affords an additional layer of oversight of the underlying managers.

II. Portfolio Construction

Portfolio construction is the holy grail of FOHF investing. It is both an art and a science. At its very core it consists of strategic asset allocation, tactical allocation, and good manager selection. As discussed earlier, all three components play an integral role in determining the performance of a FOHF and how it distinguishes itself from its peers. Taking it a step further, manager sizing within a sub strategy allocation is an important step both from portfolio construction and risk management standpoints.

i. Top Down vs. Bottom Up

Recognizing the power of manager selection as the strongest driving force in normal periods, some FOHFs adopt a "bottom-up" portfolio construction approach with a "manager-first" mindset. Others follow a more conventional strategic allocation: top-down followed by bottom-up manager selection, since strategic asset allocation is the safest bet in both normal and stressed periods. However, a third (almost exclusive) league of FOHFs are those that differentiate themselves with timely market calls reflected in tactical shifts and changes in manager selection in sub-strategies. Tactical allocation or market timing, as shown earlier, is a small but differentiating contributor and successfully practiced by only a few, especially in crisis periods.

ii. Diversification

At the heart of portfolio construction is the proven tenet of diversification, often regarded as the only free lunch in investing. The underpinnings of diversification in the FOHF context are:

- Defraying of business and headline risk
- Tapping into diverse talent and style
- Gaining exposure to various strategies, sectors, and geographies
- Reducing intra-exposure/position correlation to lower overall portfolio volatility

In recent years attempts to lower correlations have been challenged by the macro influences that have come to dominate economies and capital markets. Markets have been swept from side to side by erratic waves of risk-off and risk-on sentiments of investors. As a result, there have been growing efforts by investors to go beyond the conventional parameters of diversification mentioned above to understand how underlying exposures—both current and new additions—are likely to react to various economic regimes, systemic shocks, and, above all, different states of solvency. While conventional scenario analysis has meant to address some of these considerations, there is a growing emphasis on varying solvency levels given the stressed situations of a rising number of sovereign entities and corporations.

At the individual manager level, the question facing most FOHFs is "how much diversification is enough?" Some FOHFs follow a kitchen-sink approach and construct portfolios with seventy or more managers. While the pursuit of additional strategies by such heavily-diversified FOHFs may give the impression of seeking newer managers, the real motive is likely a search for capacity. In other words, the manager count goes up, not the drive to discover new ideas. Another reason could be a conservative client base looking to diversify away headline and business risk with less emphasis on performance, encouraging a FOHF to invest with more proven (brand) names.

iii. *Best-Ideas Portfolios*

However, more contemporary FOHFs are slanting toward building more compact portfolios concentrated in their highest conviction ideas. Intuitively, this is plausible given that investors' desire for idiosyncratic risk is greater than ever before, and over-diversification results in more pure market risk, which is the antithesis of hedge fund investing. Academic studies also lend credence to this phenomenon for a host of other reasons.

The greater the number of underlying hedge funds, the more exposed the FOHF is to hedge fund contagion arising out of liquidity shocks—deemed the most severe of conditions resulting in hedge fund failure. While FOHFs efficiently diversify away business risk, excess diversification concentrates common factor risk[6].

The higher the number of funds in a FOHF, the larger the accumulation of incentive fees at the fund level that are passed through the FOHF's vehicle. These fund-level incentive fees then become a fixed charge payable by the investor whether or not the FOHF does well or poorly[7].

Due diligence on underlying managers is expensive and the sheer volume of managers could compound that expense, quickly consuming a big chunk of the management fees. This could deter the FOHF from conducting initial and continuing due diligence in a thorough and timely, manner thus increasing operational and investment risk to the portfolio[8].

From the evidence above, one may conclude that having an excessive number of hedge fund managers in a FOHF may be counter-productive.

iv. *How much diversification is enough?*

One recent study[9] suggests that variance-reducing effects of diversification diminish once FOHFs hold more than 20 underlying hedge funds. Another study[10] suggests 10–15 funds for adequate diversification while a 2008 study[11] concluded that a diversified portfolio of approximately 40 funds is optimal for a FOHF's portfolio. The results vary due to the universe considered and the simulation methodology applied in the various studies.

Suffice it to say that there is no precise number that equates to adequate diversification. Diversification for the sake of diversification is a meaningless exercise. A best-ideas portfolio in high conviction names mindful of both downside protection and upside participation is a differentiator. Given that there is wide dispersion between top and bottom quartile performance within each hedge fund strategy[12], good quality FOHFs blend top performers within each strategy (not necessarily brand names but those most suited to respond proactively to the prevailing opportunity set) with some high-conviction newer names.

III. Risk Management

i. *Risk Mitigating Strategies*

In its simplest form, risk management is the effort to avoid permanent loss of capital. The risk of drawdowns or capital losses is fresh on the minds of investors coming out of the financial crisis. Systemic shocks and fund blow-ups both contributed to investor losses in recent times. Risk management aims to address the former while operational due diligence is geared toward developing early warning signs to avoid potential blow-ups. In the aftermath of the financial crisis, many FOHFs have become extremely risk averse and portfolio management has transformed into a risk management practice. This is partly driven by investors who flocked to large FOHFs seeking capital preservation as their primary objective. Therefore, FOHFs that espoused "sleep well at night" philosophies by attempting to smooth out interim volatility have joined others that claim low correlation as their mantra in their search for uncorrelated/low-correlated sources of return. In their attempt to do so, many FOHFs are actively seeking opportunities in Global Macro and Commodity Trading Advisors (CTAs) in addition to managing market exposures and pursuing low-volatility strategies. Some have also increased their appetite for volatility arbitrage and tail risk strategies that aim to both protect in adverse conditions and profit from heightened volatility. Some FOHFs have adopted overlay hedges through derivatives to augment risk-mitigation efforts by the underlying managers. While all the above-mentioned efforts are valid responses to volatile market conditions, experience and a track record of successfully implementing these techniques distinguishes a FOHF from those that might have yet to prove themselves in the use of such defensive tactics.

ii. *Underlying Exposure Management*

To deploy risk mitigating strategies, an understanding of underlying fund exposures is critical. Hence there is an increased emphasis on transparency and the use of risk aggregators such as Risk Metrics or MeasureRisk. The large FOHFs that command the resources and clout can open managed accounts, including separate accounts and so-called "fund of ones" with managers where they get complete security-level transparency and can select or deselect specific exposures. Others that cannot obtain such terms either leverage their strong relationships with managers to gain insights into the portfolio or compensate for lack of position-level details with a higher frequency of manager interactions and onsite visits to get a good read into portfolios.

iii. Technology and Risk Analytics

To assist in the slicing and dicing of data, risk management technology has advanced leaps and bounds in recent years with significant dollars committed to enhance technological infrastructure in terms of both personnel and computer systems. Value-creating FOHFs use technology to their advantage, purposefully knowing what to look for in the mountains of data obtained from underlying managers and overlaying that with intuition and common sense.

iv. Liquidity Management

Having learned hard lessons from the financial crisis, among the most common uses of these risk tools is an increased focus on liquidity to prevent a mismatch between terms offered to investors and liquidity afforded by underlying managers. As a consequence, liquidity-conscious FOHF managers are averse to incorporating strategies promising illiquidity premiums for longer lock-ups and thus deploy these in separate hybrid structures that more closely resemble private equity deals.

Coexisting with this need to maintain good liquidity and avoid a potential liquidity mismatch is the requirement to remain nimble and opportunistic to respond to rapidly changing market dynamics. A lock-up deprives a FOHF from redeeming from a less attractive opportunity in a timely manner and reinvesting in successful ones. The value lost is the expected premium for committing to the lock-up. FOHFs can therefore enhance their returns by redeeming their investment in weaker funds whenever the lock-up period ends and reinvesting with good funds[13]. This lack of liquidity was cited as the debilitating factor preventing timely tactical decisions, especially in stressed conditions, which left only a few to add value through dynamic allocation in rough times[3].

v. Concentration Risk

Thoughtful FOHFs are also conscious about concentration of positions through underlying managers. For example, it is quite likely that distressed managers often have exposure to some of the same post-reorganized equities. Concentrations in an underlying manager's business or exposure to multiple products from the same firm are other risks that good quality FOHFs seek to avoid.

vi. Correlations

While managing correlations to traditional markets is important, a valuable risk consideration is lowering inter-manager correlations that can help reduce the risk of systemic shocks. Creating alternative streams of return (i.e. difference between the returns of different assets[14]) is the true measure of real diversification.

vii. Leverage

Varying gross exposures, or leverage through underlying managers, is a risk tool that some FOHFs employ, especially in uncertain market environments. This shows in their preference for underlying managers who can alter their gross exposures dynamically while maintaining low net exposures. A look-through measurement of gross notional exposure (including derivatives) is valuable in this regard. Some FOHFs are more focused on netting out long and short positions to assess their exposure to market risk. Others prefer a low net exposure but a higher gross exposure, indicating deployment of both longs and shorts to capture upside and protect and profit on the downside.

Performance

Performance, while important, is best understood in the context of the character of the FOHF: What role did the investor expect the FOHF to perform in a particular market environment? This takes us back to emphasizing the importance of gaining a good understanding of the investment philosophy of the FOHF. For example, in a highly volatile environment, one would expect a "low-volatility-focused" FOHF to do far better than a "return-seeking" FOHF. On the other hand, the opposite is likely to be true in normal to up markets. Thus, performance is a test of a FOHF's character and relative performance is a measure of its success or failure compared to its own peer group. This is a more meaningful assessment of performance than broad comparisons to the HFOF benchmark, which is a mix of hedge funds that vary in character and style. As discussed under *"How Have FOHFs Been Evaluated Historically,"* comparing FOHFs to the HF Composite has many shortcomings and, therefore, is not a meaningful yardstick.

Besides relative performance, it is equally important to measure absolute performance. In this regard, good quality FOHFs display consistency of performance in market cycles best suited to a FOHF's character, led by consistent contribution from the principal performance drivers. Leading FOHFs display superiority of their performance drivers vis-à-vis others that also employ similar drivers with equal emphasis. Attribution for good quality FOHFs also shows balance in performance contributors and allocation weights suggesting that the "strategy bets are paying off."

Another valuable performance measurement exercise is to compare a FOHF to the HFRX (investible index) individual strategy indices weighted by the fund-specific strategy allocation (see Value-Creation Illustrated, below). This is a reflection of a manager's value addition/ detraction through active portfolio management.

Price

In the post-crisis environment, many FOHFs have reduced their price by waiving incentive fees and offering concessions on management fees (avg. ranges 0.9%–1.25%) in their bid to retain and win larger clients. Some have used their heft to their advantage to bargain for fee breaks from their underlying managers. In some ways, the fee concessions suggest that maintaining and growing market share is an important priority for FOHFs to maintain their competitive advantage. Some FOHFs have also started offering advisory services to enable investors to go direct, thus offsetting some revenue loss from managing discretionary assets.

On the other hand, other FOHFs have managed to maintain their fees. Included in this group are those who have built an institutional framework and project an image of "safety" in a persistently volatile environment.

But then there are also those who have maintained their fees because they firmly believe in their continued ability to create value and have retained and won new clients in the face of adversity. It is for such value creators that investors are inclined to pay incentive fees (avg. 5%–10%) to align the FOHF's economic interests with their own.

Hence, pricing power will rest with those FOHFs that can deliver on a dual mandate, to capture market upside and offer protection on the downside either in commingled vehicles or in customized mandates.

Perpetuity

Last but not least, longevity of a business is as important as continuation of a successful track record. Investors seek stability both in terms of performance and the team that delivers it. Thus, compensation and incentive structures that foster the building of a legacy into the future are confidence-enhancing. In private FOHF firms, periodic admission of new partners and broad-based equity ownership is a good indicator of building toward the future. FOHFs that are part of large corporations indirectly inherit both the stability and the balance sheet support of their parent companies; however, autonomous functioning of such subsidiaries also helps engender the entrepreneurial culture that is more typical of smaller firms.

"Sticky" capital is another sign of a stable business—hence the attraction of less-fickle institutional investor for FOHFs. However, some FOHFs that historically have managed more high-networth (than institutional capital) assets show equally good stability of capital if the latter represents long-standing private clients and family offices who have stuck with the firm over the long haul. Capital garnered from private banking platforms is less encouraging as also evidenced by the massive redemptions faced by FOHFs (especially in Europe) in the recent past.

With the passage of time, it is expected that FOHFs get more seasoned, perform better, and increase their clientele (and thus their AUM). This should afford better economies of scale and lower risk of failure, which are often distractions for a newer FOHF. However, with size, capacity constraints could be detrimental to future performance[15]. Therefore, while size is an advantage, it begins to wear off after some time and becomes an obstacle to superior performance.

To address this, some good quality larger FOHFs leverage their size advantage to negotiate better terms with underlying managers and use their superior infrastructure to discover and evaluate newer hedge fund managers (see the discussion under *Research Agenda,* above). Together, the size advantage of a large FOHF and the nimbleness and superior performance potential of smaller hedge fund managers form a potent combination.

6P Summarized

NEPC's 6P approach helps to explain the DNA of a FOHF and the role that it is likely to perform in a portfolio. This process also seeks to gauge the effectiveness of the FOHF in performing its designated role and also helps to verify (through performance analysis) if the FOHF was successful in delivering on its mandate and how. While past is not necessarily prologue, consistency of character and conduct bodes well for the future and acts as a fair indicator of sustainability of a FOHF's ability to create value. Again, it cannot be emphasized enough that value creation should be assessed in the context of the role a FOHF is expected to play. For example, a FOHF that espouses low volatility should be evaluated for consistency of behavior and success in delivering on that mandate versus others in its peer group.

Investors who aspire to build direct hedge fund portfolios can use such value creating FOHFs as benchmarks for their own success. For those FOHF investors who cannot go direct, such value creators in respective peer groups are viable alternatives to their existing FOHFs should the latter pale in comparison. Again, it is highly unlikely that a FOHF will display "all" the desirable characteristics discussed under each "P" above. The objective is to discover the most attractive candidate in a peer group that presents a balanced picture consisting of most, if not all, desirable features.

Value-Creation Illustrated

In our search for value creation, NEPC has identified a select group of FOHFs that score high in aggregate across the 6Ps. While these FOHFs differ by philosophy, style, and processes, they are all value creators.

Presented below **(Exhibit 8)**, using NEPC's internal reference codes, is the attribution (see Appendix 1 for a description of the methodology) of value creation between asset allocation or manager selection of some of NEPC's highest-conviction FOHFs. We have grouped them by their underlying philosophies:

Core FOHFs espouse stability of returns and adopt the "sleep well at night" approach to seek more modest returns with lower volatility. Core FOHFs aim to protect on the downside and participate quite modestly on the upside.

Enhanced Core FOHFs follow a dual philosophy of providing good downside protection in bad market environments and seeking above-average returns in normal-to-up markets. In aggregate, they tend to deliver returns higher than core FOHFs but lower than their return-seeking brethren.

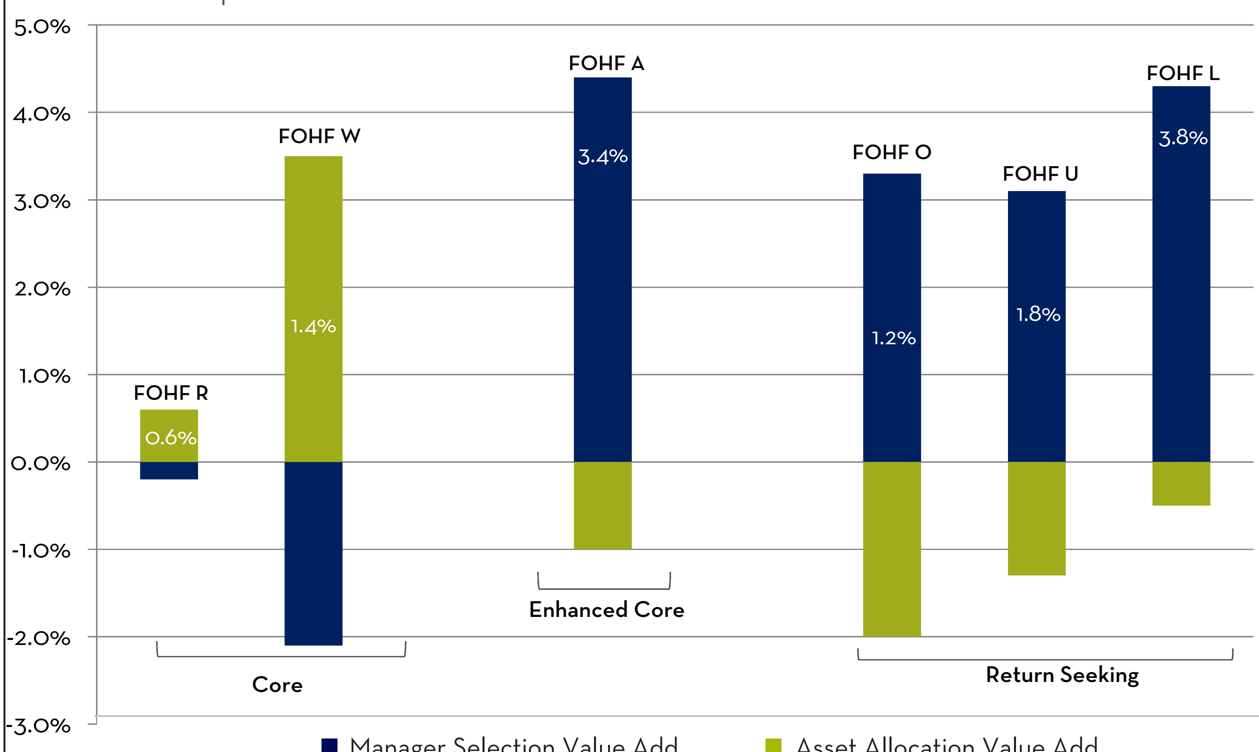
Return-Seeking FOHFs strive for above-average returns. They are less concerned about interim volatility and focus more on downside protection as their risk-management tool. Return-seeking FOHFs aim to generate superior returns in normal to up markets.

Most core managers rely more on the power of strategic asset allocation (as the safer bet) as can be observed from the attribution of Managers R and W. Manager selection has not been their source of value addition; on the contrary it has detracted value.

With a dual philosophy of above-average returns and good downside protection, Manager A, in the enhanced core category, has consistently created significant value through good manager selection losing a little through asset allocation over time.

In the return-seeking category, manager selection is again the biggest driving force. Manager L, in the exhibit below, has been the most successful in creating value through manager selection, having lost a little through asset allocation shifts. Manager O's addition through manager selection is similar to Manager U's though it has suffered more from unfavorable asset allocation decisions thus reducing its overall value addition.

Exhibit 8: A Sample of Value-Creators on NEPC's FOHF Platform



Source: NEPC

Note: Numbers in bars indicate total value added (during 2005-2011) over FOHFs' style-representative HFOF benchmarks.

As one may observe from **Exhibit 8**, the greater the penchant for superior performance, the greater the influence of manager selection on performance. Though not reflected in the Exhibit above, we noticed that in the crisis period of 2008, asset allocation reasserted itself as the dominant force even for those managers that otherwise depend more on manager selection to seek above-average returns (e.g., Managers A, U, O and L). Empirical evidence from our sample is mostly consistent with the findings of the EDHEC Study illustrated in Exhibits 7 (a) and (b).

Overall, Managers A and L rise to the top in their ability to add value through good manager selection that can help protect the downside in a crisis period while continuing to capture the upside in up markets.

This proves that, although discovering value-creating FOHFs may seem like "finding a needle in a haystack," such FOHFs do exist. It takes a thorough 360-degree due diligence effort to discover them. NEPC's FOHF research is founded upon and guided by this conviction. While the select few can be described as value creators at this point in time, our constant evaluation of these FOHFs might not qualify them for this status should they no longer add value or depict inconsistency in value creation as we have observed to be the case with some storied names post-2008. Also it is important to emphasize that incorporating any value creating FOHF (like the few above) into a portfolio should be based on the overall portfolio objectives specific to each investor as not all value creators are alike in their DNA.

Market Opportunity

In times where investors are questioning their value proposition, FOHFs have to rise to face the challenge by clearly demonstrating superior manager selection and/or effective asset allocation.

Investors in the current environment of low expected returns and elevated volatility are concerned about both capital preservation and growth of capital. FOHFs that can respond to investor urgent needs will find themselves ranked among the select few that have distinguished themselves as good channels of underlying manager performance and value enhancers.

Despite the overall increase in macro driven factors spurring higher volatility, most institutional investors are maintaining their openness toward hedge funds and looking to increase their allocations when most investment classes remain challenged in this environment. Skilled portfolio managers and traders will likely continue to migrate to the hedge fund world lured by a better compensation structure. Higher inflows of money and influx of talent could see greater exploitation of market inefficiencies and a further compression of returns. This will force further separation of the good from the not-so-good managers. Hence, manager selection for FOHFs will assume even greater importance and, in turn, constrict the universe of top-quality FOHFs.

As discussed earlier, there are a few FOHFs that consistently demonstrate the ability to add value through asset allocation, tactical shifts, and careful manager selection. Sensitive to investor demands but confident of their ability to create value, these FOHFs have responded by enhancing their roster of services (and their value proposition). This has manifested itself in more frequent client interaction, greater client education, and, above all, customized portfolio construction and risk aggregation reports. Some larger FOHFs continue to gain client favor more on the strength of their institutional frameworks that offer a timely response to investors' penchant for safety and avoidance of headline risk. As a result, many established institutionally-oriented shops are getting larger.

As shown in **Exhibit 9** from the Deutsche Bank Alternative Survey , "emphasis on access to highly sought after managers" and "focus on brand name managers" have given way to "actual returns," "focus on more niche managers," and "increased focus on bespoke mandates." Acting merely as concierges to provide access to brand name hedge funds is no longer sufficient for success, and the successful FOHFs of tomorrow have to deliver on manager selection, customized portfolio construction, and generating returns (in line with their investment mandate). This will lead to a survival of the fittest and impose higher barriers to entry.

To deliver on this mandate, we envision three forms in which FOHFs are likely to prevail going forward:

– FOHFs with high-conviction ideas and dynamic portfolio allocation capabilities adopting a "Core" portfolio style will continue to attract first-time hedge fund investors and those who remain resource and/or skill constrained[2].

– FOHFs with high-conviction "niche" ideas and dynamic portfolio allocation capabilities will likely complement core allocations of single-strategy hedge funds in client portfolios.

– FOHFs will increasingly customize portfolios in bespoke mandates to supplement and/or complement other single-strategy hedge fund allocations.

In addition, there is a new breed of FOHFs attempting to distinguish themselves by practicing some high-conviction trades in conjunction with investing in underlying managers. Direct trades are a reflection of a FOHF's own insights into the marketplace and exploit those segments of the market untapped by underlying managers, and/or adjust exposure to certain market factors.

Conclusion

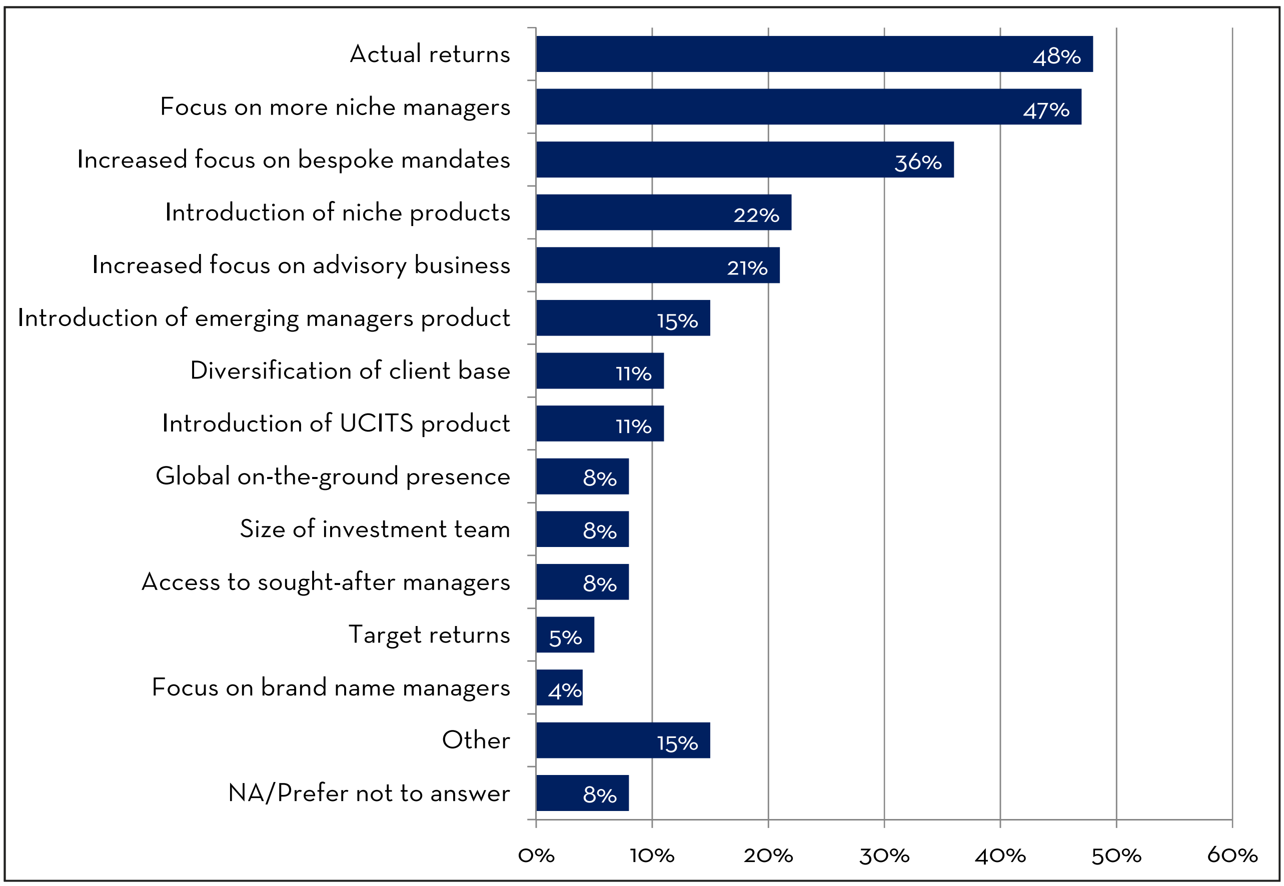
We believe that funds of hedge funds remain an important tool for certain investors who seek to capture the benefits of hedge funds, but who do not have the resources, expertise, or governance model to build a direct portfolio of hedge funds. It is important for FOHF investors to recognize, however, that they are buying not just the underlying hedge funds but also the portfolio construction capabilities of the FOHF manager. Understanding the drivers of portfolio construction, i.e. primarily the FOHF's investment philosophy or DNA, then becomes equally important. DNA is behavior which is less likely to change and thus a more likely predictor of what the FOHF can do *for* a total investment program as well what it can do *to* that program.

Therefore when evaluating FOHFs, the focus should be on testing managers' portfolio construction capabilities rather than on making a flawed comparison to a broad hedge fund benchmark i.e. HF Composite. In evaluating FOHFs, investors ought to compare FOHFs' performance to *stylistically* similar peer(s) or to investors' own success in replicating FOHFs' experience if investors are planning on building their own direct program. Any shortfall in investors' own experience or in comparative performance of similar FOHFs, is likely attributable to managers' value addition through a combination of strategic asset allocation, dynamic/tactical shifts in allocation, and astute (underlying) manager selection from a universe of both good and not-so-good hedge funds.

Our research indicates that attribution of value creation varies by FOHF, while only a small segment of the FOHFs' universe has proven to be a class of value creators, overall. These "best-in-class" FOHFs, in and of themselves, offer both a viable choice for hedge fund investors (who are either resource and/or skill constrained) and a benchmark for those investors looking to build their own FOHF. The challenge is to find such value creators among a multitude of 2,000 plus FOHFs.

By adopting a holistic approach—as demonstrated by NEPC Hedge Fund Research's 6P due diligence process—investors can identify such value-creating FOHFs as key building blocks for their long-term investment programs.

Exhibit 9: In a competitive market environment, how have you differentiated yourself from your peers?



Source: 2012 Deutsche Bank Alternative Investment Survey

Appendix 1: Methodology to Compute Attribution of Value Added by NEPC Approved FOHFs

To compute the attribution of value creation, as shown in **Exhibit 8**, we followed the following steps:

We matched the FOHF to the appropriate FOHF sub-index (conservative, diversified, strategic) closest in description to the manager's philosophy.

We next computed the FOHF annual returns based on the manager's actual asset allocation for a particular year and multiplied it with the HFRX sub-strategy index (investable index). The aggregate of all strategies gave us the fund-weighted HFRX sub-strategy returns for the FOHF.

The difference between an equal-weighted HFRI sub-strategy index and the aggregate of the FOHF specific weighted sub-strategy performance is indicative of the manager's value addition/detraction from strategic asset allocation.

Finally, we subtracted the aggregate of the FOHF specific weighted sub-strategy returns from the FOHF's actual performance for the year to determine the value addition/detraction from manager selection. *This might be biased slightly upward, given differences in the profile of managers that constitute the HFRX index and those available to a FOHF. However, comparison on this basis still affords a relative measure of value added/detracted from manager selection.*

Note: We chose the HFRX investable indices (over DJCS sub strategy indices) as they are constructed using quantitative and qualitative considerations that select funds having the highest statistical likelihood of producing a return series that is most representative of the reference universe of strategies.

The commonly-used DJCS sub-strategy indices are constructed in a manner where the weight of each member fund is calculated per its AUM. This is likely to result in the index being skewed to reflect the performance of larger funds in the index, which tend to control the bulk of the assets in the respective categories.

The intuition behind our approach is echoed in a recent paper by Franklin and El-Showk[16]

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In addition, it is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:

1. Performance can be volatile and investors could lose all or a substantial portion of their investment
2. Leverage and other speculative practices may increase the risk of loss
3. Past performance may be revised due to the revaluation of investments
4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
6. These funds are not subject to the same regulatory requirements as registered investment vehicles
7. Managers may not be required to provide periodic pricing or valuation information to investors
8. These funds may have complex tax structures and delays in distributing important tax information
9. These funds often charge high fees
10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy